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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,317	07/09/2001	Alexandros Biliris	2000-0280-CON	9040

7590   10/04/2007

Mr. S H Dworetsky
AT&T CORP.
Room 2A-207
One AT&T Way
Bedminster, NJ 07921

EXAMINER
JEAN GILLES, JUDE

ART UNIT	PAPER NUMBER
2143	

MAIL DATE	DELIVERY MODE
10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/901,317	BILIRIS ET AL.
	Examiner	Art Unit
	Jude J. Jean-Gilles	2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08/17/2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>3, 4, 6-18, 20, 22, and 24-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>3, 4, 6-18, 20, 22, and 24-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>07/09/2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☒ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This Action is in regards to the Reply received on 08/17/2007, and to the Interview

conducted on 09/07/2007.

Response to Amendments/Arguments

2.   The Examiner thanks Appliant representative for the Interview accorded on

09/07/2007, during which, Mr. Thomas Isaacson presented his arguments to the Office

in order to expedite prosecution of the application.   Claim 24 has been amended.

Claims 3, 4, 6-18, 20, 22, and 24-28 remain pending in the application with claims 1, 2,

5, 19, 21, and 23 Have been cancelled herein. Claims 3, 4, 6-18, 20, 22, and 24-28

represent a method and apparatus for an "METHOD AND APPARATUS FOR

CONTENT DISTRIBUTION NETWORK BROKERING AND PEERING."

Applicant's arguments with respect to claims 3, 22, 24, and 25 have been

carefully considered, but are not deemed fully persuasive. Applicant's arguments are

deemed moot in view of the existing ground of rejection as explained here below.

Applicants' amendments to the independent claim 24 are not properly made and as to

perhaps place the claim in condition for allowance.

The dependent claims stand rejected as articulated in the First Office Action and

all objections not addressed in Applicant's response are herein reiterated.

In response to Applicant's arguments, 37 CFR § 1.11(c) requires applicant to

"clearly point out the patentable novelty which he or she thinks the claims present in

view of the state of the art disclosed by the references cited or the objections made. He

or she must show the amendments avoid such references or objections."

Applicant's Request for Reconsideration filed on 08/17/2007 has been carefully

considered but is not deemed fully persuasive. However, because there exists the

likelihood of future presentation of this argument, the Examiner thinks that it is prudent

to address Applicants' main points of contention:

A: First, let us discuss the arguments presented during the interview dated

09/07/2007. In this interview Applicant' representative Mr. Thomas M. Isaacson

presented the argument that in Narendran, col. 2. lines 46-53, replicated servers are

discouraged. The mechanism described in this section is not recommended because of

the the need to keep the caches of the content servers consistent. In contrast, Applicant

argues that Joffe, in col. 1, lines 28-33, lines 67, continue in col. 2, lines 47, 58, 59, and

col. 3, lines 44-53 where replicated servers are required. The use of identical content

servers at strategic locations is recommended.

B: Applicant contends that, on page 3 of the previous Office action the thrust of

Applicant's main argument that, by a preponderance of evidence, on skill in the art

would not have sufficient motivation or suggestion to combine the references. This is

primary because of expressed teaching away from the combination of the references.

The Examiner never addresses fully our argument and certainly does not provide any

explicit findings regarding a response to why our arguments are insufficient by a

preponderance of the evidence.

As to point A, it is the position of the Examiner that the combination of

Narendran, and Joffe in detail teaches the limitations of the above mentioned claims.

However, in view of Applicant's remarks in the interview dated 09/07/2007, the Office

respectfully concludes that the applicant mischaracterizes the teachings of Narendran

and that the argument above is moot. The Applicant has presented an alleged

contradiction in the teachings of Joffe and Narendran. After meeting with Supervisor

David Wiley, the Office concludes that the Applicant has mischaracterized the teachings

of Narendran, and that the argument presented above is moot.The section of Joffe

presented in the arguments are valid and in accordance with the teachings of the prior

of record. However, the Office found that the section of Narendran presented in the

argument above is at the least weak, and at most is not inclusive in the teachings of

Narendran, This section is an excerpt from the Background section of the prior art of

record. In which, Narendran points the problems that exist with the prior art, while

presenting his patent as a solution to the underlined problems (please, review the entire

section of Narendran, col. 2, lines 29-53). Narendran specifically talks about "A number

of other server-side techniques that are based on caching.....and that these techniques

are generally referred to as server side caching or ..... In the Summary of the invention

col. 2, starting at lines 55, Narendran specifies "The invention provides improved

server-side techniques for processing client requests received over the Internet and

other communication networks, without the problems associated with the above-

described conventional approaches...". Clearly Narendran teaches away from the

Applicant's assertion. The rejection under *35 USC § 103* over Joffe and Narendran is maintained.

Point B is simply a reiteration of point A. See point A above a to why there is no teaching away of the prior art of record, and see rejection of claim 3 below as to why there is motivation to combine.

Examiner notes that no new matter has been added and that the new claims are supported by the application as filed. However, applicant has failed in presenting claims and drawings that delineate the contours of this invention as compared to the cited prior art. Applicant has failed to clearly point out patentable novelty in view of the state of the art disclosed by the references cited that would overcome the 103(a) rejections applied against the claims, the rejection is therefore sustained.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

4.   Claims 3, 4, 6-18, 20, 22, and 24-28 remain pending are rejected under 35

U.S.C. 103(a) as being unpatentable over Joffe et al (Joffe) U.S. patent No.

6,5185,619, in view of Narendran et al (Narendran) U.S. 6,070,191.

Regarding claim 3: Joffe teaches the invention substantially as claimed. Joffe

teaches a method of serving content in a packet-switched network comprising:

choosing from a plurality of content distribution networks which content

distribution network will respond to a content request from a client (*column 10, lines 48-*

67; column 11, lines 24-42);

redirecting the client to the chosen content distribution network so that the

content request will be served by the chosen content distribution network (*column 11,*

lines 24-42; column 13, lines 31-46), wherein

"one of the plurality of content distribution networks is chosen only if a measured load

of the one of the plurality of content distribution networks does not exceed a

predetermined capacity reserved on the one of the plurality of content distribution

networks". The Examiner in the previous Office action acknowledged that Joffe does

not disclose the details of the claim and that the patent of Applicants contend that Joffe

does disclose the details of this step and that Grove et al (Grove) U.S. 6,820,133 B1

further teaches the limitation. In the reply dated 08/18/2006, applicants submit that

Grove does not dislose "...a content distribution networks that does not exceed a

predetermined capacity reserved on the one of the plurality of content distribution

networks".

In the same field of Endeavor, Narendran teaches "...Thus, the documents are

distributed such that the load on each server is proportional to its capacity in terms of

the maximum number of HTTP connections that it can support simultaneously..."[see

Narendran; column 5, lines 30-46] and further discloses "...Unlike the previous two

examples, in this case the solution is able to achieve only "approximate" load

balance. The flow from server S.sub.3 to the sink, which specifies the load on

S.sub.3, is 0.61, which is 0.14 less than its capacity. This load has been

diverted to S.sub.1 as extra load as shown on the redundant arc between S.sub.1

and the sink. Thus, the load on S.sub.1 is now 0.34..." ..."[see Narendran; column 14,

lines 20-48].

Accordingly, it would have been obvious to one of ordinary skill in the networking

art at the time the invention was made to have incorporated Narendra's teachings of

choosing a Content Distribution only if a measured load of the one of the plurality of

content distribution networks does not exceed a predetermined capacity reserved with

the teachings of Joffe. This combination will provide the ability of a content distribution

network "to assign requests for data objects made by clients among multiple network

servers" (see Joffe, Summary) using the pre-computed redirection probabilities and the

load distribution algorithm of Narendran, thereby ensuring that the load is properly

balances across N document servers (see Narendran, Summary). By this rationale,

claim 3 is rejected.

Regarding claim 4: the combination Joffe-Narendra teaches the method of

claim 3 wherein the content distribution network is chosen based, at least partly,

determination of which of the plurality of the content distribution networks is close to

the client (see Narendra, column 2, lines 40-53).

Regarding claim 6: the combination Joffe-Narendra teaches the method of

claim 3, wherein the content to be served by the chosen content distribution network

comprises content embedded in a document to be served to the client, and wherein

redirecting the client to the chosen content distribution network further comprises

rewriting references to the embedded content before serving the document to the client

[*see Joffe, column 13, lines 1-46*].

Regarding claim 7: The combination Joffe-Narendra teaches the method of

claim 6 wherein the reference to the embedded content is rewritten to point to a server

in the chosen content distribution network [*see Joffe, column 13, lines 1-46*].

Regarding claim 8: The combination Joffe-Narendra teaches the method of

claim 6 wherein the reference to the embedded content is rewritten to point to a domain

name served by the content distribution network [*see Joffe, column 10, lines 47-65*].

Regarding claim 9: The combination Joffe-Narendra teaches teach the method

of claim 6 wherein the reference to the embedded content is rewritten so that an original

reference may be readily parsed from a corresponding one of the rewritten reference (*see Joffe; column 2, lines 13-35*).

Regarding claim 10: The combination Joffe-Narendra teaches the method of claim 9 wherein the chosen content distribution network utilizes the corresponding one of the rewritten references to obtain the embedded content if the chosen content distribution network does not have an up-to-date copy of the embedded content in a cache (*see* Narendra; *column 4, lines 16-40*).

Regarding claim 11: The combination Joffe-Narendra teaches the method of claim 3 wherein the step of redirecting the client to the chosen content distribution network further comprises resolving domain name system queries resolve to content served by the chosen content distribution network [*see Joffe, column 10, lines 47-65*].

Regarding claim 12 The combination Joffe-Narendra teaches the method of claim 11 further comprising answering the domain name system queries are answered with a network address of content served by the chosen content distribution network (*see Joffe; column 2, lines 13-35*).

Regarding claim 13: The combination Joffe-Narendra teaches the method of claim 11 comprising answering the domain name system queries with a network address of a domain name system server responsible for the chosen content distribution network [*see Joffe, column 10, lines 47-65*].

Regarding claim 14: The combination Joffe-Narendra teaches the method of claim 11 comprising answering the domain name system queries are answered with a

domain name of content served by the chosen content distribution network (*see* Narendra; *column 4, lines 1-15).*

Regarding claim 15: The combination Joffe-Narendra teaches the method of claim 11 comprising forwarding the domain name system queries to a domain name server responsible for the chosen content distribution network and which directly answers the domain name system queries (*see* Narendra; *column 4, lines 1-15).*

Regarding claim 16: The combination Joffe-Narendra teaches the method of claim 3 wherein the content distribution network serves the content request from a local cache and wherein the content distribution network has access to a second copy of the content if there is a cache miss (*see* Narendra; *column 4, lines 17-40).*

Regarding claim 17: The combination Joffe-Narendra teaches the content distribution method of claim 16 wherein the content distribution network includes a table of associations between references to content served by the content distribution network and references to a second copy of the content served from elsewhere in the network [*see Joffe, column 13, lines 1-46*].

Regarding claim 18: The combination Joffe-Narendra teaches the method of claim 16 wherein the content distribution network can transform references to content served by the content distribution network into second references to a second copy of the content served from elsewhere in the network ((*see* Narendra; *column 4, lines 16-40).*

Regarding claim 20: The combination Joffe-Narendra teaches the brokering domain name server of claim 22 wherein the predetermined policy reflects a chosen

content distribution network and redirection mechanism for each of a plurality of regions

of client network addresses (*see* Narendra; *fig. 3*).

Regarding claim 22: The combination Joffe-Narendra teaches a brokering

domain server comprising:

a domain name system engine which is capable of answering domain name

system queries from a client [*see Joffe, column 10, lines 47-65*]; and

a policy module which directs the domain name system engine to answer the

domain name system queries in accordance with a predetermined policy which resolves

a domain name to a-server in a content distribution network chosen from a plurality of

content distribution networks [*see* Narendra; *fig. 3;* column 5, lines 30-46; column 14,

lines 20-48; column 1, lines 14-67] wherein:

the policy module further comprises an interface to information received from the

plurality of content distribution networks and wherein the policy module modifies the

predetermined policy in response to the information [*see* Narendra; *fig. 3;* column 5,

lines 30-46; column 14, lines 20-48; column 1, lines 14-67]

the information further comprises load information and wherein the

predetermined policy reflects capacity reserved on each of the plurality of content

distribution networks (see Joffe; *column 5, lines 45-59*).

Regarding claim 24: The combination Joffe-Narendra teaches a method of

redirecting content requests between content distribution networks (*column 5, lines 38-*

44), comprising :

receiving a request for a document which contains one or more embedded

content references [*see Joffe, column 13, lines 1-46*];

retrieving the document[*see Joffe, column 13, lines 1-46*];

choosing one of a plurality of content distribution networks to serve the

embedded content, the one of the plurality of content distribution networks being chosen

only if a measured load of the one of the plurality of content distribution networks does

not exceed a predetermined capacity reserved on the one of the plurality of content

distribution networks [*see* Narendra; *fig. 3;* column 5, lines 30-46; column 14, lines 20-

48];

rewriting the document so that the embedded content references point to content

stored at the chosen content distribution network [*see* Narendra; *fig. 3;* column 5, lines

30-46; column 14, lines 20-48; column 3, lines 1-23] and

transmitting the rewritten document (see Joffe; *column 3, lines 22-25*).

Regarding claim 25: The combination Joffe-Narendra teaches a system

comprising:

means for choosing a content distribution network from a plurality of content

distribution networks for responding to a content request from a clients[*see Joffe,

column 13, lines 1-46*]; and

means for redirecting the client to the chosen content distribution network so

that the content request will be served by the chosen content distribution network (see

Joffe; *column 13, lines 31-46*),

wherein

the means for choosing a content. distribution network from a plurality of

content distribution networks for responding to a content request from a client is

configured to choose a content distribution network only if a measured load of the

content distribution network does not exceed a predetermined capacity reserved

on the content distribution network [*see* Narendra; *fig. 3;* column 5, lines 30-46; column

14, lines 20-48; column 3, lines 1-23]

Regarding claim 26: The combination Joffe-Narendra teaches the system of

claim 25. wherein:

the content to be served by the chosen distribution network comprises content

embedded in a document to be served to the clients [*see Joffe, column 13, lines 1-46*];

and

the means for redirecting the client to the chosen content distribution network

so that the content request will lx served by the chosen content distribution network

(see Joffe; *column 13, lines 31-46*),

further comprises:

means for rewriting references to the embedded content before serving

the document to the client *see* Narendra; *fig. 3;* column 5, lines 30-46; column

14, lines 20-48; column 3, lines 1-23].

Regarding claim 27: The combination Joffe-Narendra teaches the system of

claim 25, further comprising:

means for serving content from a local cache (*see Grove; column 24, lines 37-*

67; see Grove, column 3, lines 9-22; column12, lines 32-49); and

means for serving content from a second copy of the content when the means for

serving content from a local cache experiences a cache miss *see* Narendra; *fig. 3;*

column 5, lines 30-46; column 14, lines 20-48; column 3, lines 1-23].

Regarding claim 28: The combination Joffe-Narendra teaches the system of

claim 27, further comprising:

means for transforming references to content served by the content distribution

network into second references to the second copy of the content served from

elsewhere in the network *see* Narendra; *fig. 3;* column 5, lines 30-46; column 14,

lines 20-48; column 3, lines 1-23]

Conclusion

5.   Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant

is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from examiner should be directed to Jude Jean-Gilles whose telephone number is (571) 272-3914. The examiner can normally be reached on Monday-Thursday and every other Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley, can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-9000.

Jude Jean-Gilles

Patent Examiner

Art Unit 2143

JJG

       September 25, 2007

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100